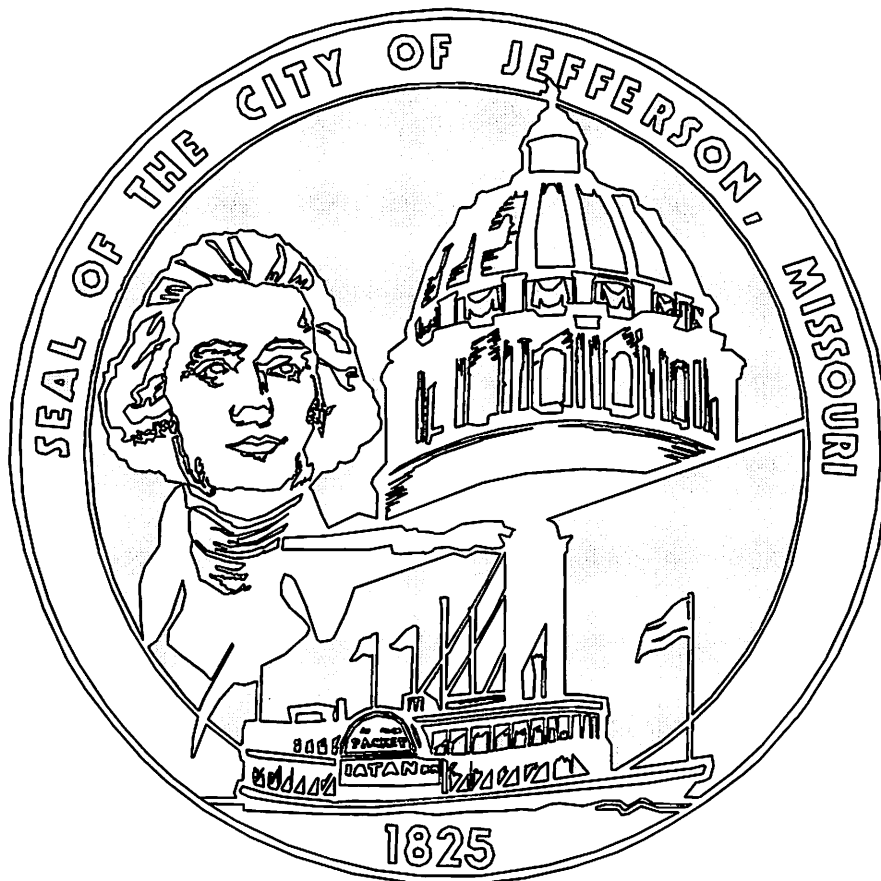




CITY OF JEFFERSON STANDARD DRAWINGS

REVISED : 1/2013
7TH EDITION



FOR FREE DOWNLOAD, GO TO CITY OF JEFFERSON WEB SITE:
<http://www.jeffcitymo.org/publicworks/engineering.html>

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* Denotes Modification/Addition for year 2013
City of Jefferson Standards

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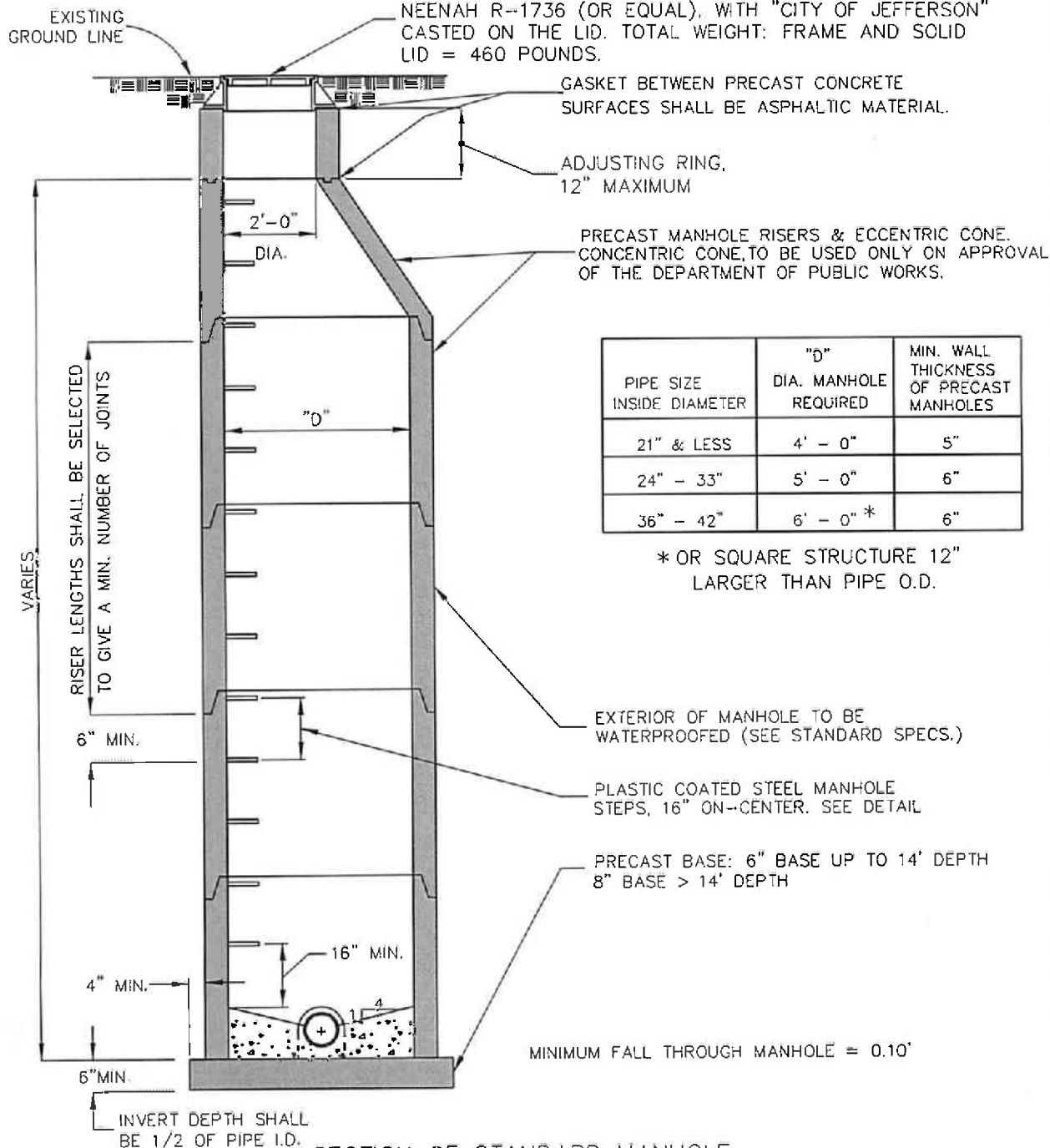
For comments or corrections please E-Mail at: jcengineering@jeffcitymo.org

 **City of Jefferson**
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
320 E. McCarty Street
Jefferson City, Missouri, 65101
Ph:(573)634-6410
Fax:(573)634-6562
CITY OF JEFFERSON
STANDARD DRAWINGS
REVISED EDITION: 1/2013

MANHOLE NOTES:

1. ALL REQUIRED PIPE OPENINGS SHALL BE PLANT CAST IN M.H. UNITS. FIELD ALTERATIONS OF OPENINGS WILL BE PERMITTED, PROVIDED WALLS ARE SCORED WITH A MASONRY SAW TO A DEPTH SUFFICIENT TO SEVER REINFORCING STEEL. A CHIPPING HAMMER MAY THEN BE USED TO REMOVE CONCRETE.
2. USE PRECAST BASE AND RISER WITH A-LOK (OR EQUIVALENT) CONNECTOR OR, POURED BASE AND PRECAST RISER WITH A-LOK (OR EQUIVALENT) FOR MAX. GRADE OF 15%. USE Z-LOK (OR EQUIVALENT) FOR GRADES OVER 15%.
3. MIN. DISTANCE BETWEEN ANY TWO ADJACENT PIPES SHALL BE 4".
4. GROUT PIPES INTO PLACE WITH EXPANSIVE GROUT.
5. MANHOLE TOP ADJUSTMENT SHALL BE ACCOMPLISHED BY THE USE OF CONCRETE OR HDPE ADJUSTING RINGS.
- * 6. REINFORCEMENT SHALL MEET AASHTO M199, SECTION 14.4. CIRCUMFERENTIAL REINFORCEMENT SHALL CONSIST OF EITHER ONE OR TWO LINES OF STEEL. THE TOTAL AREA OF REINFORCEMENT PER VERTICAL FOOT SHALL NOT BE LESS THAN 0.0025 TIMES THE INTERNAL DIAMETER IN INCHES.

STANDARD MANHOLE FRAME AND SOLID LID SHALL BE NEENAH R-1736 (OR EQUAL), WITH "CITY OF JEFFERSON" CASTED ON THE LID. TOTAL WEIGHT: FRAME AND SOLID LID = 460 POUNDS.



SECTION OF STANDARD MANHOLE

REVISION AND DESCRIPTION
DATE: 8/2007
NO: 1
ADDED NOTE #6

MANHOLE DETAILS

STANDARD DETAILS

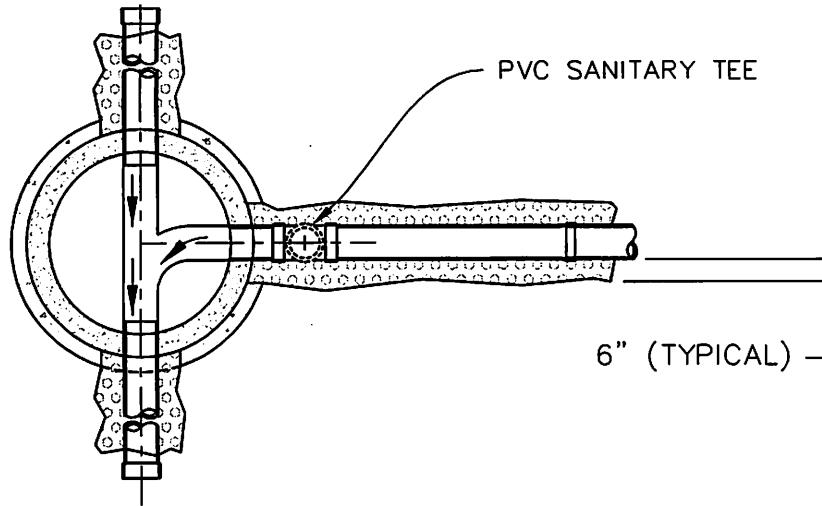
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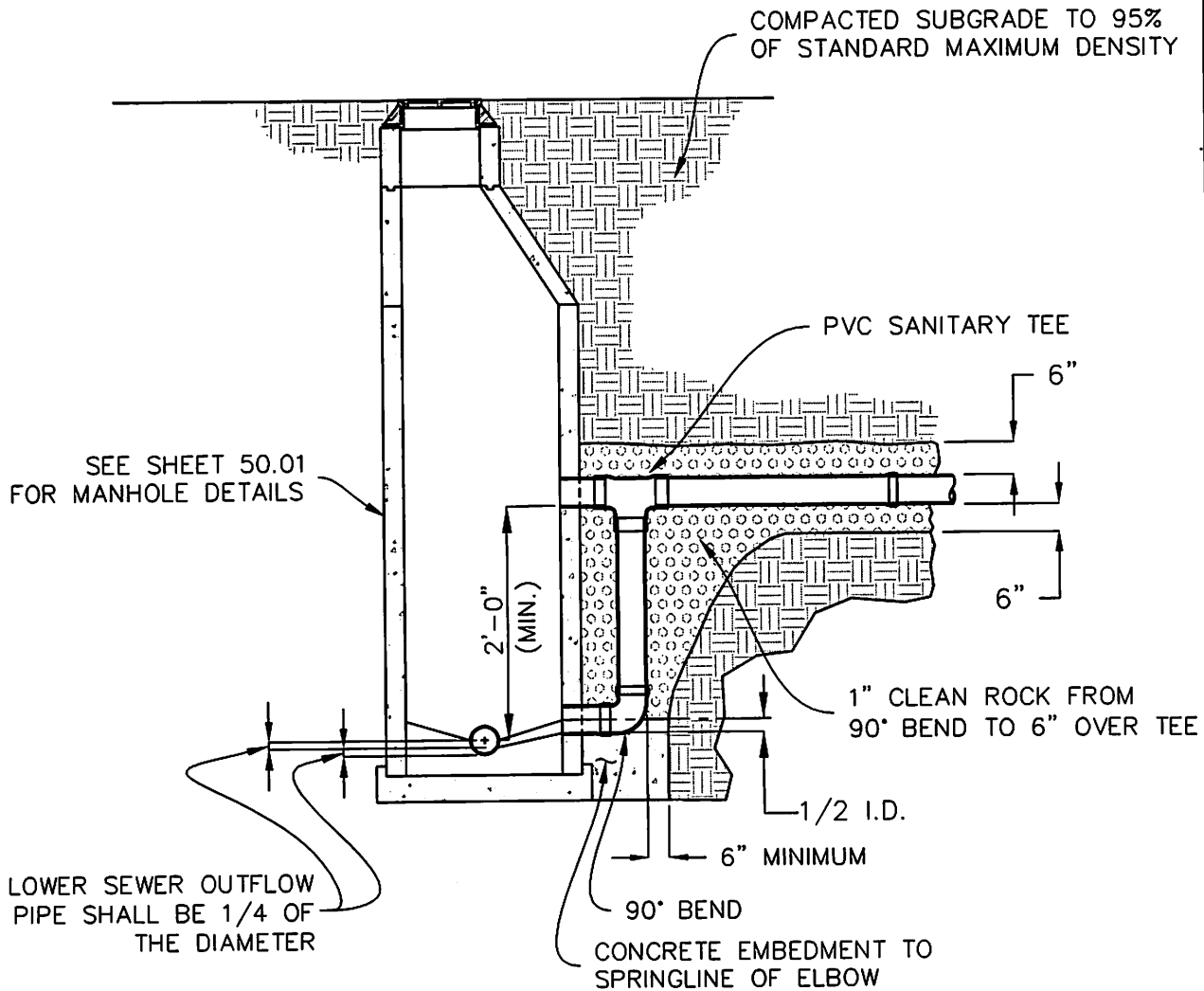
DATE



SHEET NUMBER
1 OF 6
SECTION
50.01



PLAN



OUTSIDE SECTION

STANDARD OUTSIDE DROP MANHOLE

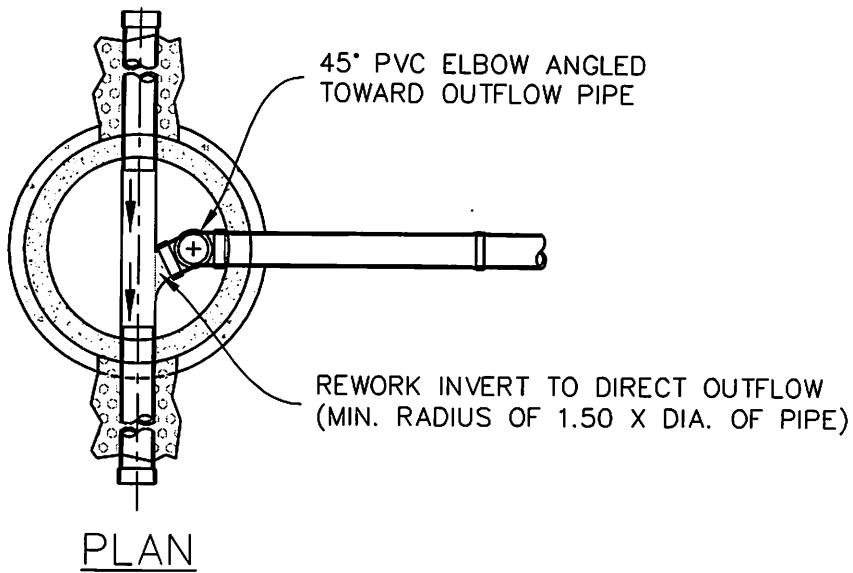
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| 1 | 7/2007 | REVISED RISER PIPE EMBEDMENT FROM CONCRETE TO 1" CLEAN ROCK |

OUTSIDE DROP
MANHOLE DETAILS

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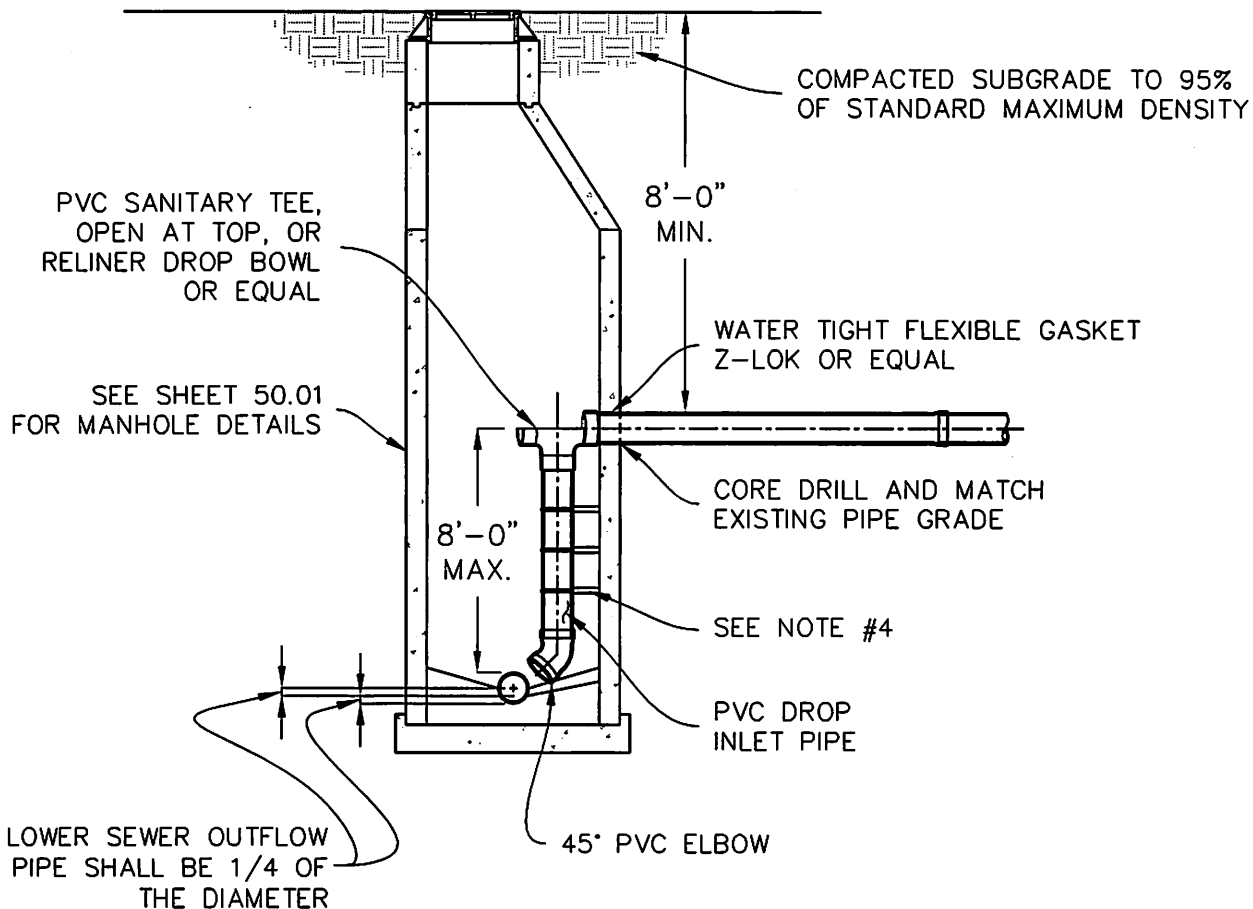


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2 OF 6
SECTION
50.02



NOTES:

1. INSIDE DROP CONNECTION ONLY ALLOWED WITH PUBLIC WORKS DEPARTMENT APPROVAL.
2. DROP INLET PIPE SHALL BE THE SAME SIZE AND MATERIAL AS SEWER LINE.
3. DROP INLET PIPE MAY BE ADJUSTED TO A MAXIMUM OF 5% DEFLECTION.
4. SECURE PVC PIPE TO MANHOLE WALL WITH STAINLESS STEEL PIPE BRACKETS/STRAPS AND STAINLESS STEEL BOLTS. BRACKETS/STRAPS SHALL BE A MINIMUM OF 6" FROM ANY PIPE JOINT. BRACKETS/STRAPS SHALL BE PLACED 4 FT. MINIMUM APART. THERE SHALL BE A MINIMUM OF 2 BRACKETS/STRAPS.



PROFILE OF INSIDE DROP MANHOLE

REVISION AND DESCRIPTION

DATE:

NO:

INSIDE DROP
MANHOLE DETAILS

CHECKED BY:

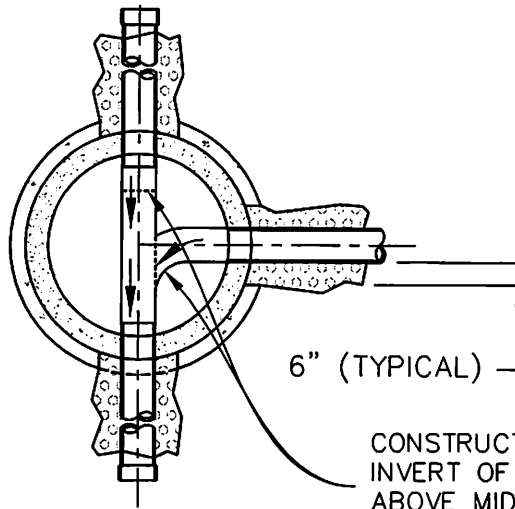
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DATE:
1/2013

City of Jefferson
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

SHEET NUMBER

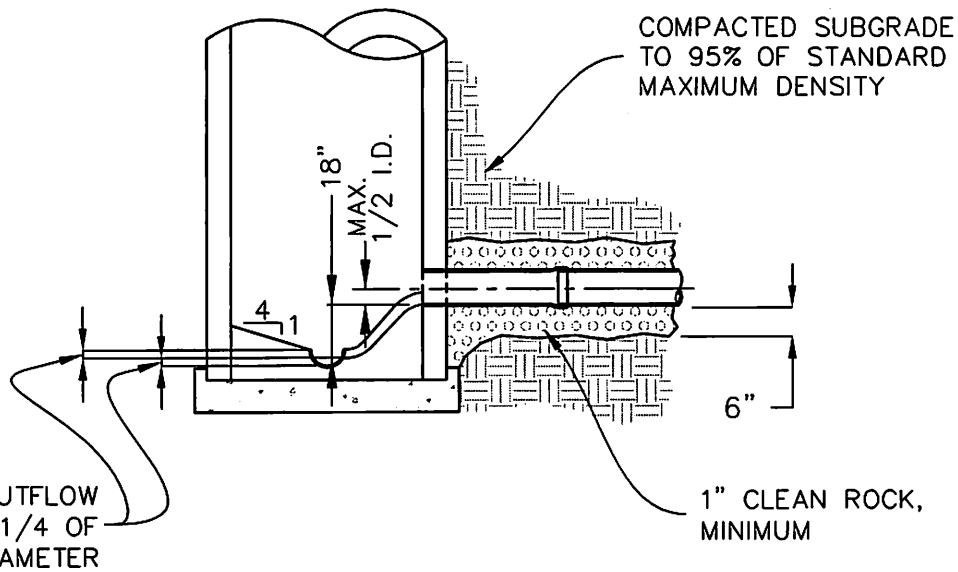
3 OF 6
SECTION
50.03



6" (TYPICAL)

CONSTRUCT SPILLWAY WHERE
INVERT OF UPPER SEWER IS
ABOVE MID HEIGHT OF
LOWER SEWER

PLAN



LOWER SEWER OUTFLOW
PIPE SHALL BE 1/4 OF
THE DIAMETER

INSIDE SECTION

| REVISION AND DESCRIPTION | | DATE: | NO: |
|---|--|--------|-----|
| REVISED RISER PIPE EMBEDMENT FROM CONCRETE TO 1" CLEAN ROCK | | 7/2007 | 1 |

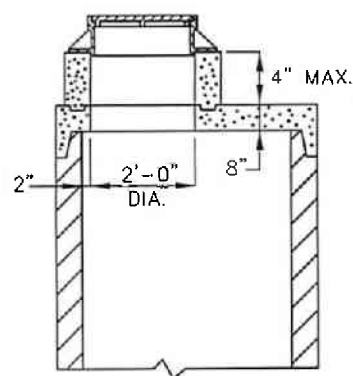
| MANHOLE DETAILS | | | |
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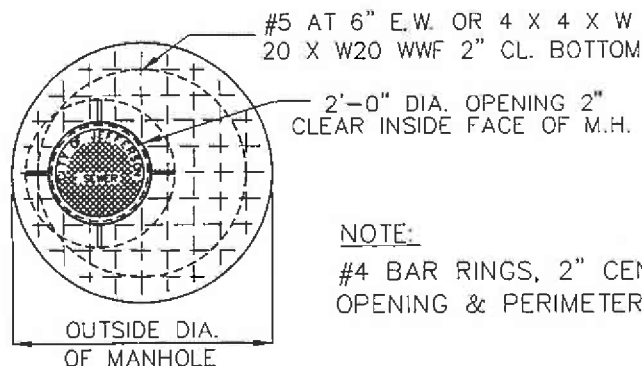
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Jefferson
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING DIVISION

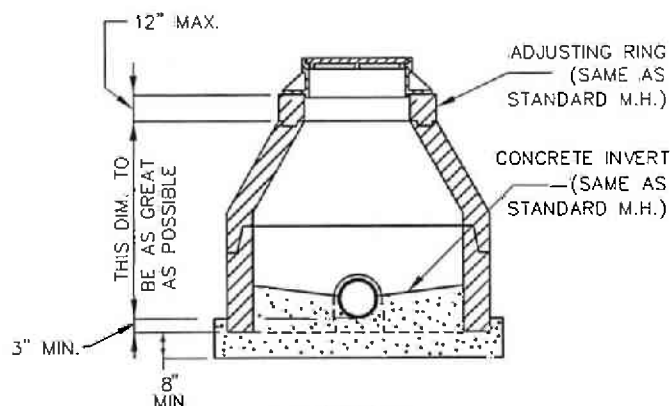
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| SHEET NUMBER |
| 4 OF 6 |
| SECTION |
| 50.04 |



SECTION
ALTERNATE SLAB TOP



PLAN



SECTION
SHALLOW 4'-0" DIA. M.H.

NOTES:
STANDARD MANHOLE FRAME AND
SOLID LID SHALL BE
NEENAH R-1736 (OR EQUAL),
WITH "CITY OF JEFFERSON"
CASTED ON THE LID.
TOTAL WEIGHT: FRAME AND
SOLID LID = 460 POUNDS.
GRADED LID SHALL BE
NEENAH R-2421-A

| NO: | DATE: | REVISION AND DESCRIPTION |
|-----|--------|---|
| 1 | 7/2007 | REVISED RISER PIPE EMBEDMENT FROM CONCRETE TO 1" CLEAN ROCK |

MANHOLE DETAILS

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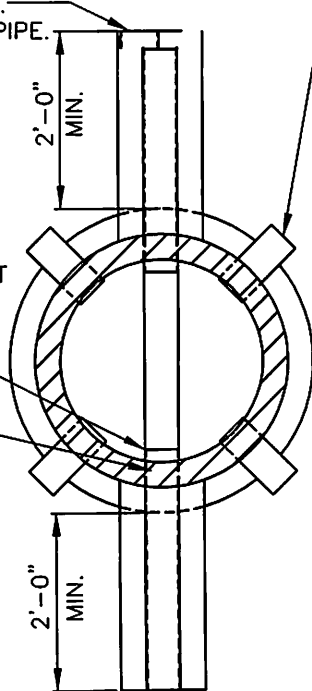
SHEET NUMBER
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SECTION
50.05

CRADLE UNDER PIPE & UP
TO 1/6 OF PIPE O.D.
ABOVE BOTTOM OF PIPE.

WHEN BASE AND INVERT ARE PLACED AT THE SAME
TIME, INLET AND OUTLET PIPES AND BOTTOM RISER
OF M.H. SHALL BE SET ON SOLID CONCRETE BLOCKS.

PIPE SHALL PROJECT
COMPLETELY INTO
MANHOLE 3"
MAXIMUM.

MANHOLE WATER
STOP GASKET &
CLAMP (TYP.)



OPTIONAL: CONCRETE BLOCK BASE:

SUBJECT TO PRIOR APPROVAL OF
THE PUBLIC WORKS DEPARTMENT.

REVISION AND DESCRIPTION

DATE:

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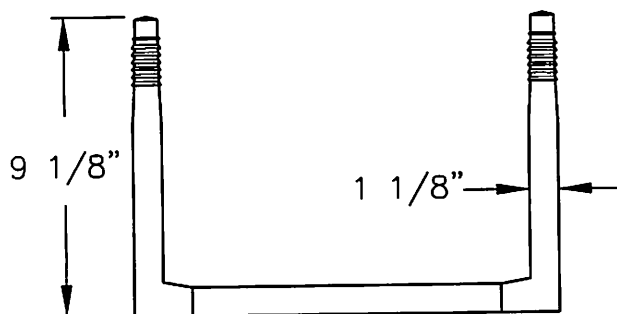
MANHOLE DETAILS

STANDARD DETAILS

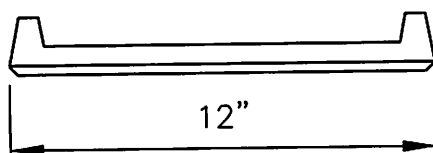
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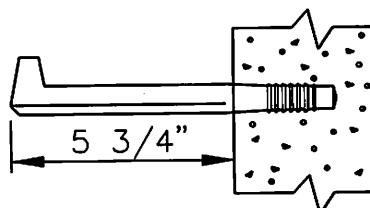
TOP VIEW



FRONT VIEW

MANHOLE STEP DETAIL

MANHOLE STEP TO BE
M.A. INDUSTRIES INC.
#PS-1 OR EQUIVALENT
TO BE INSTALLED IN
MANHOLES GREATER
THAN 10 FT.

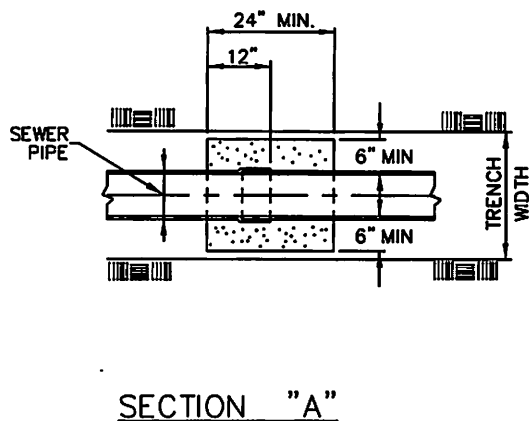
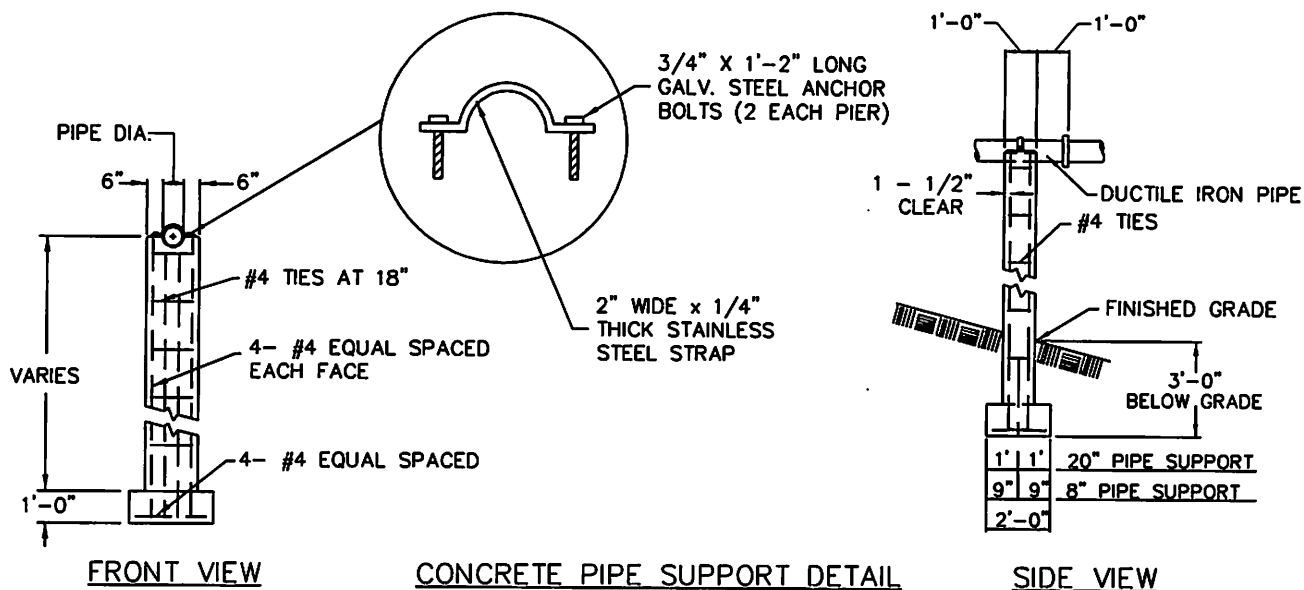


SIDE VIEW

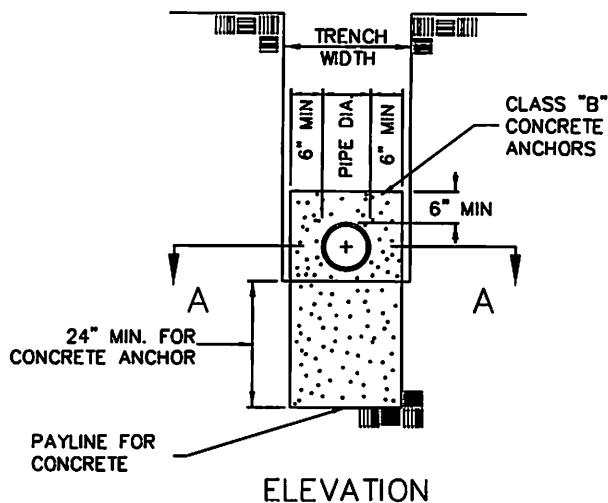


SHEET NUMBER

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50.06



CONCRETE ANCHOR
DETAIL



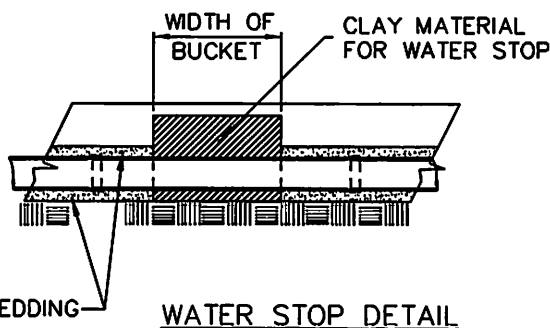
| GRADATION FOR GRANULAR BEDDING MATERIAL ASTM STANDARD C33 | | |
|--|------------|-----------|
| | SIEVE SIZE | % PASSING |
| PASSING | 3/4" | 90 - 100% |
| PASSING | 1/2" | ----- |
| PASSING | 3/8" | 20 - 55 % |
| PASSING | NO. 4 | 0 - 10 % |
| PASSING | NO. 8 | 0 - 10 % |

WHEN IN:

1. DIRT, GRADE APPROX. 8' WITHOUT GRANULAR MATERIAL & BACK FILL WITH DIRT (OR CLAY)

2. ROCK, GRADE DITCH APPROX. 8' WITH DIRT,(OR CLAY) & BACK FILL WITH DIRT (OR CLAY)

3. WET AREAS PLACE DITCH BLOCKS APPROX. 100' APART BETWEEN MANHOLES, IN DRIER AREAS PLACE ONE (1) DITCH BLOCK BETWEEN MANHOLES.



| REVISION AND DESCRIPTION | DATE: | NO: |
|----------------------------------|--------|-----|
| Added Stainless Steel Strap Size | 1/2006 | 1 |

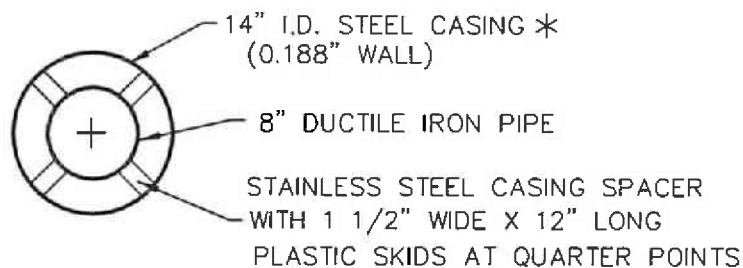
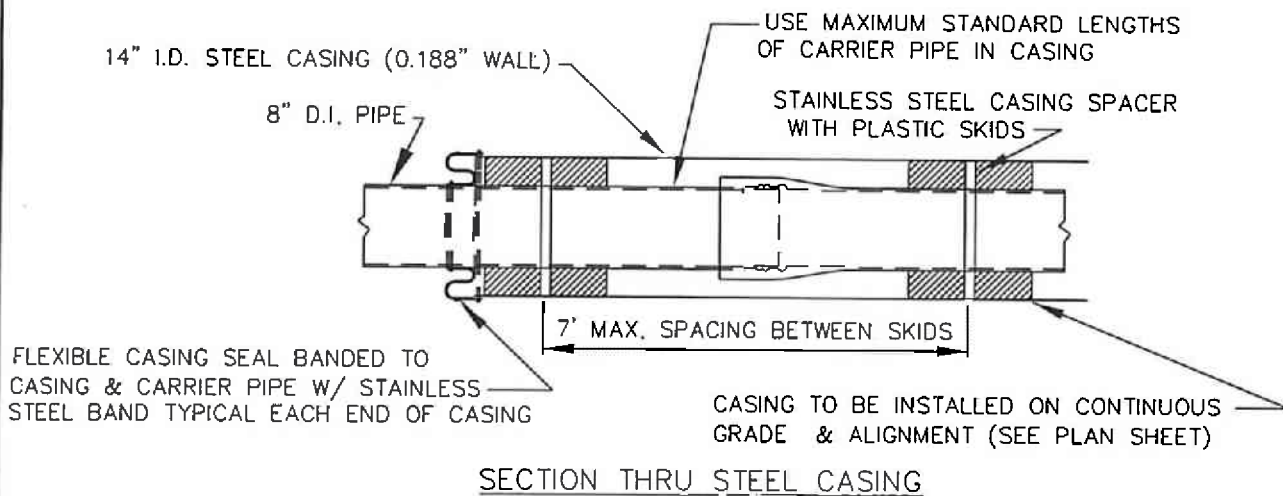
| MISC. SANITARY SEWER DETAILS | STANDARD DETAILS |
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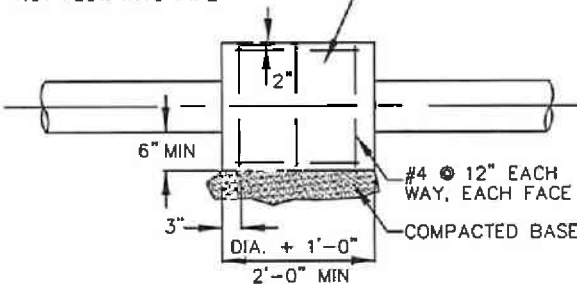
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| <p>City of Jefferson</p> <p>DEPARTMENT OF PUBLIC WORKS</p> <p>ENGINEERING DIVISION</p> |
|--|

| SHEET NUMBER |
|--------------|
| 1 OF 2 |
| SECTION |
| 51.01 |



JOIN PIPES IN PROPER ALIGNMENT & FILL JOINT SO CONCRETE WILL NOT FLOW INTO PIPE

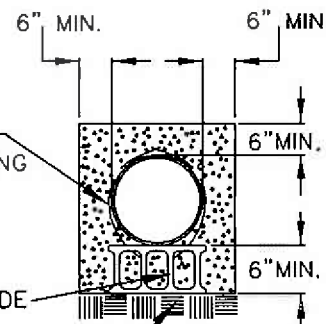


CONCRETE COLLAR

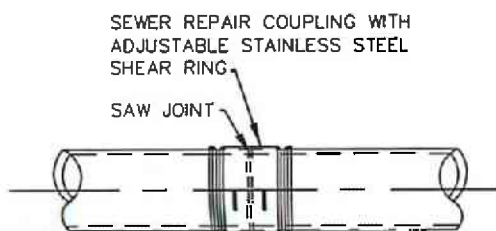
USE #9 WIRE (2 PER JOINT OF PIPE) OR #4 RE-BAR TO TIE DOWN PIPE TO PREVENT FLOATING

SET CONCRETE BLOCKS TO GRADE

POUR CONCRETE DIRECTLY AGAINST EXCAVATION OR SET ON CRUSHED ROCK IF REQUIRED FOR STABILIZATION OF WET TRENCH.



CONCRETE ENCASEMENT DETAIL



COUPLING DETAIL

NOTE:

1. USE MANUFACTURERS GASKETED FITTINGS. FOR OTHER MAIN TYPES.
2. GAP BETWEEN SAW ENDS MUST BE SMALL AS POSSIBLE WITH A MAX. OF 1/2" FOR VCP PIPE.

REVISION AND DESCRIPTION

DATE:

NO:

MISC. SANITARY SEWER DETAILS

STANDARD DETAILS

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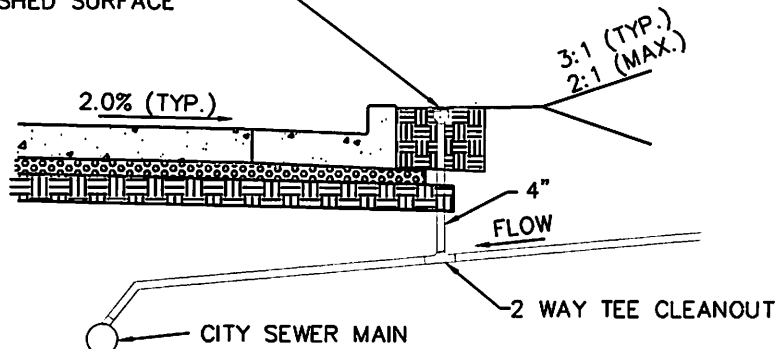
DATE

City of **Jefferson**
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

SHEET NUMBER

2 OF 2
SECTION
51.02

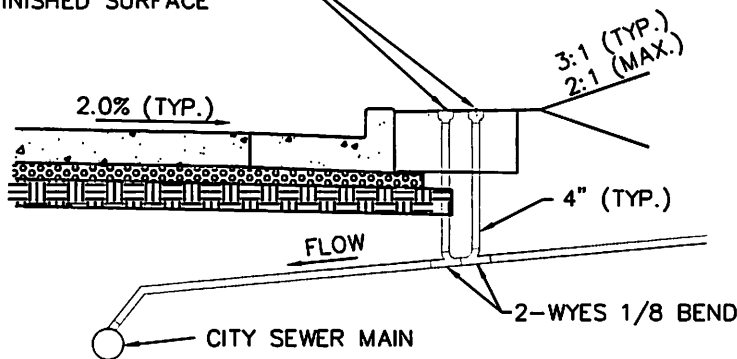
THREADED COUNTERSUNK
CLEANOUT AND CAP FLUSH
WITH FINISHED SURFACE



ALL LATERAL CONNECTIONS TO THE
MAIN SHALL BE MADE WITH WYE
FITTINGS.

OUTSIDE CLEANOUT DETAIL
FOR $\leq 2'$ OF COVER

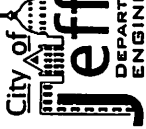
THREADED COUNTERSUNK
CLEANOUT AND CAP FLUSH
WITH FINISHED SURFACE



ALL LATERAL CONNECTIONS TO THE
MAIN SHALL BE MADE WITH WYE
FITTINGS.

OUTSIDE CLEANOUT DETAIL
FOR $> 2'$ OF COVER

NOTE:
USE WATER STOP GASKETS AT
INTERSECTIONS OF PIPES AND
MANHOLES. SEE SS-2, FOR
A-LOK AND Z-LOK LOCATION
INFORMATION.

| REVISION AND DESCRIPTION | | |
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| NO: | DATE: | |
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| MISC. CLEANOUT DETAILS | | STANDARD DETAILS |
| CHECKED BY: | DRAWN BY: | DATE: |
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| SHEET NUMBER | | |
| 1 OF 2 | | |
| SECTION | | |
| 52.01 | | |

